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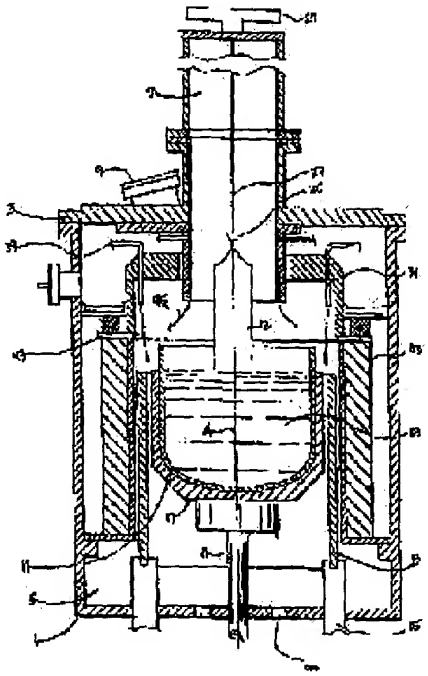
(54) METHOD FOR CONTROLLING OXYGEN CONTENT OF SILICON WAFER ADDED WITH ANTIMONY OR ARSENIC IN LARGE AMOUNT AND APPARATUS THEREFOR

(57)Abstract:

PROBLEM TO BE SOLVED: To obtain a method for controlling the oxygen content of a single crystal silicon rod having a middle to high oxygen content by housing a silicon melt into the hermetically sealed chamber of an apparatus for pulling up the crystal and adjusting the gaseous pressure of an atmosphere to a specific value while the single crystal silicon rod grows.

SOLUTION: The vacuum pressure of the apparatus 1 for pulling up the silicon is extracted by a pump on the outside of a shell 3 from a discharge port 37 at the bottom of this shell and is replaced with an inert purging gas. Polysilicon of the prescribed at. for growing the single crystal silicon rod 21 is packed into a crucible 11 and a prescribed current is supplied via a heat panel 13 to melt the packing. The silicon melt 23 contg. additives, such as antimony and arsenic, is added with the additives in such a manner that electric resistance of 8 to 20 milliohm



centimeters may be obtd. The evaporation of silicon 1 oxide is suppressed in such a manner that the atmosphere gaseous pressure on the melt 23 has an initial value of 30Torr and a final value of 275Torr, by which the oxygen content of the rod is controlled.

LEGAL STATUS

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